



ENERGY POLICY UPDATE

FEBRUARY 3, 2014

The Energy Policy Update electronic newsletter is published by the Arizona Governor's Office of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by community outreach personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email [Gloria Castro](#).

UPCOMING WEBINARS

DOE Webinar: [Real Time Energy Management: Improving Energy Efficiency Every 15 Minutes](#)
Tuesday, February 4
3:00 p.m. to 4:00 p.m. EST
[Register to attend the webinar.](#)
Webinar Sponsor: [Better Buildings Challenge](#)

DOE Webinar: [Solar Forecasting Metrics](#)
Thursday, February 13
3:00 p.m. to 5:00 p.m. EST
[Register to attend the webinar.](#)

DOE Tribal Energy Program Webinar: [Strategic Energy Planning](#)
Wednesday, February 26
11:00 AM - 12:30 PM MST
[Register to attend the webinar.](#)

CONTENTS

- [ARIZONA-RELATED](#)
- [ALTERNATIVE ENERGY & EFFICIENCY](#)
- [ENERGY/GENERAL](#)
- [INDUSTRIES & TECHNOLOGIES](#)
- [LEGISLATION & REGULATION](#)
- [WESTERN POWER](#)
- [STATE INCENTIVES/POLICIES](#)
- [GRANTS](#)
- [EVENTS](#)

The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

[AARP Files Challenge to Utilities' Rate Policy](#)

[Arizona Republic, Jan. 23] AARP is asking utility regulators to reconsider their decision to allow the Johnson Utilities and Pima Utility Co. water companies to charge customers for the income-tax expenses the company owners face from their company profit. AARP filed comments in the two cases before the Arizona Corporation Commission, which regulates rates at water companies as well as electric and gas utilities. The issue of charging income-tax expenses has been brewing at the regulatory body for more than two years. Utilities set their rates by adding up all of their justifiable expenses in a given year and then asking the commission to approve rates that allow them to recover those expenses plus a given profit. Years ago, companies organized as "S corporations" such as Pima were able to include their income-tax expenses in their rates, but in the 1980s the Corporation Commission changed that policy. That meant that such companies passed their tax liability directly to their shareholders. In the case of Pima Utility, that was chiefly Sun Lakes developer Ed Robson's family trust. Other water companies such as Johnson Utilities are similarly organized. But a February decision last year reversed that policy again, allowing such companies to include tax liability in their rates. Commissioner Brenda Burns was the lone opposition on the five-member commission when that decision was made.

[ASU Launches Center for Emergency Management and Homeland Security](#)

[ASU News, Jan. 20] The need to expand preparation, response and management capabilities for various-scale emergencies has led to the creation of the Center for Emergency Management and Homeland Security (CEMHS) within the College of Public Programs at Arizona State University. The center fuses academics, research and solution delivery capabilities to meet significant incident or crisis mitigation, preparation, response, recovery and management needs of public and private sector stakeholders. It will leverage existing facilities and expertise developed at the ASU Polytechnic campus in Mesa with additional new space and opportunities at the ASU Downtown Phoenix campus. The center will also educate and train public management professionals.

[AWC Sees Savings from Conservation Campaign](#)

[Yuma Sun, Through Arizona Western College's Turn It Off energy conservation campaign, the district saw an 11.5 percent savings that amounted to almost \$100,000. Thanks to the district-wide internal communications campaign that encouraged people to take part in saving energy, AWC used over 1 million less kilowatt-hours of energy in 2013 compared to 2012. The 1,084,800 kw-hour reduction was seen despite the addition of a new soccer field, which required power for lights, watering and other uses during the fall soccer season. According to Steve Eckert, director of Facilities Operations, the Turn It Off campaign is designed to "raise awareness and modify behavior of our faculty, staff and students. Eckert was responsible for creating the campaign along with Scott McKeogh, creative director. "We wanted to focus on simple steps people could take in their own environment – their room in the residence hall, their office - to help cut down energy use," said Eckert. A variation of three messages was posted around campus encouraging everyone to: "Turn it Off," "Power it Down" and "Unplug." In addition to posters and bookmarks with the slogans, there were also messages on computer monitor stickers and light switch plates.

[Advocates, Utilities Agree on Arizona Rooftop PV Solution](#)

[Energy Prospects West, Jan. 21] Stakeholders in Arizona have agreed to waive but not eliminate a requirement that electric utilities obtain 30 percent of their renewable energy from rooftop solar-photovoltaic installations. The Arizona Corporation Commission entertained comments on a recommendation that Administrative Law Judge Teena Jibilian filed in the renewables case on Dec. 30. Neither Arizona Public Service nor Tucson Electric Power opposed Jibilian's recommended decision, which allows waiver of the 30-percent solar PV rule. Reasons for the waiver still need to be established and proposals are being prepared, APS spokeswoman Jenna Shaver said. The proposals will be presented in February, when the commission is expected to vote on the case. The Residential Utility Consumer Office supported the recommended order, as did the Solar Energy Industries Association, Western Resource Advocates, and the Vote Solar Initiative.

[Federal Inquiry Centers on Gila Bend Solar Plant](#)

[Arizona Republic, Jan. 29] The U.S. Department of Labor and U.S. Immigration and Customs Enforcement are investigating subsidiaries of the Spanish company that took a \$1.45 billion federal loan to build a massive solar power plant near Gila Bend. The company, Abengoa, also faces complaints from more than 20 subcontractors who say they were not paid promptly for their work in building the plant. About \$40 million in disputed payments is outstanding. Abengoa officials in Spain and representatives of its Arizona subsidiaries declined to comment on the labor investigations or contractor disputes. The Labor Department has been investigating the power plant and Abengoa subsidiary Abeinsa EPC since last year, according to a response to a public-records request from *The Arizona Republic*. ICE began an inquiry into the company's Phoenix office this month, according to e-mails among those involved in the investigation. The e-mails were shared with *The Republic*. The two federal agencies declined to discuss what they are investigating. The Labor Department generally is concerned with companies paying proper wages. ICE is primarily concerned with ensuring that workers are legal U.S. residents or have the legal documentation to work in this country. It is unlikely the investigations could lead to a default on the federal loan. The Solana Generating Station was completed last year and sells electricity to Arizona Public Service Co., using the proceeds to pay off the loan. However, the Labor Department and ICE can levy fines and even criminal charges against employers.

[EPA Wants Stricter Pollution Controls at Arizona Plants, Mines](#)

[Phoenix Business Journal, Jan. 28] The U.S. Environmental Protection Agency wants new pollution controls on a half-dozen Arizona industrial facilities — including two copper mines and two cement plants. The EPA contends the pollution controls will reduce smog and improve air quality and visibility at national parks and wilderness areas of the state. The six facilities on the EPA's list include Asarco's smelter at its Hayden mine; Phoenix-

based Freeport McMoran Copper & Gold Inc.'s smelter at its Miami copper mine and a Tucson Electric Power plant in Pima County. Phoenix Cement Co.'s plant in Clarkdale, a CalPortland Cement Co. plant near Tucson and a chemical plant near Kingman operated by Belgium-based Lhoist Group were also cited. Phoenix Cement is owned by the Salt River Pima-Maricopa Indian Community. Asarco is owned by Grupo Mexico. The EPA will hold public meetings in Phoenix on Feb. 25 and Tucson on Feb. 26 and will accept comments from the impacted companies and other interested parties. A decision on extra pollution controls on the facilities is expected by the end of June.

[Griffin Tours Desalination Plant in Yuma](#)

[Sierra Vista Herald, Jan. 20] [PHOENIX — With an eye to explore new solutions to Arizona's long-term water supply challenges, State Sen. Gail Griffin recently joined representatives from the Central Arizona Project on a tour of the U.S. Bureau of Reclamation's Yuma Desalting Plant to learn more about the facility and the viability of desalination as new source of water for the state. "As chairman of the Senate Government and Environment Committee, I am keenly aware of the importance of water to our state's economy and enjoyed the opportunity to learn more about an existing desalination facility here in Arizona," Griffin said. "While thoughtful planning and policy-making have protected Arizona from the kinds of water shortages faced in other states like California, it is important to explore new sources of water to ensure that our economy and our population continue to grow." Sen. Griffin's tour included a comprehensive examination of the facility's operations, including reverse-osmosis membranes through which Yuma area agricultural drainage water is filtered so that it can be returned to the Colorado River as part of the treaty obligations between the United States and Mexico. The plant is designed to treat about 100,000 acre feet of water per year, saving about 75,000 acre feet of Colorado River water annually. While those treaty obligations remain in force, the Bureau of Reclamation has refused to operate the facility since 1993, choosing instead to divert water to Mexico directly from the Colorado River, leading to an 100,000 acre-feet per year reduction in the water supply in Lake Mead. Because of Arizona, and specifically, CAP's junior priority, this loss of water puts Arizona's Colorado River water supply at increasing risks of shortage.

[Jobs Available in Fast-Growing Solar Industry](#)

[Arizona Republic, Jan 27] The solar industry added 23,682 people to its workforce in the U.S. last year, according to an industry trade group. The small industry is growing at nearly a 20 percent annual rate, much faster than the general U.S. workforce, which added 2.18 million jobs last year and grew at a rate of 1.6 percent, according to the Bureau of Labor Statistics. "The industry has grown an astounding 53 percent in the last four years alone, adding nearly 50,000 jobs," said Andrea Luecke, executive director and president of The Solar Foundation. "That growth is putting people back to work and helping local economies." SolarCity, a California company that controls a large portion of the Arizona rooftop installation market, was advertising openings for at least 14 jobs in the Phoenix area Monday on its website, solarcity.com. The jobs ranged from sales consultants and permit coordinators to installers.

[Report: Phoenix Reduces Greenhouse Emissions by 7 Percent from 2005](#)

[Cronkite News, Jan. 22] PHOENIX – A new methane-capture system in a Buckeye landfill used by America's sixth-largest city helped reduce annual carbon dioxide equivalent emissions by 40,880 metric tons from 2005 levels. Putting LEDs in streetlights and adding solar panels like the ones on Phoenix's garages conserved 8,513 metric tons of carbon dioxide equivalent emissions. Using biodiesel fuel in city vehicles has saved 6,068 metric tons of carbon dioxide equivalent emissions from entering the air. A series of small steps has helped the city of Phoenix reduce its greenhouse gas emissions by about 7 percent, according to a report by Arizona State University.

[TEP South-Side Plant to Stop Coal Burning by End of 2017](#)

[Arizona Daily Star, Jan. 29] Tucson Electric Power Co. and the Environmental Protection Agency have essentially agreed on a plan to stop all coal burning by the end

of 2017 at TEP's Sundt Generating Station in south-side Tucson. Under the plan, TEP would convert its only generating unit currently capable of burning coal to run exclusively on natural gas. That plan has apparently won favor at TEP because it's considered much more cost-effective than the alternative, which would be adding pollution controls to the Sundt plant on East Irvington Road. The plant's remaining three units already run on natural gas. The proposal for the switch was contained in a detailed EPA air-pollution cleanup proposal released Tuesday, covering six Arizona industrial sites that also include the California Portland Cement facility in the Rillito area northwest of Tucson. The overall proposal is aimed at improving visibility at well over a dozen national parks, national monuments and wilderness areas in Arizona and three surrounding states. The TEP switchover represents a big victory for local environmentalists, led by the Sierra Club. They have pushed since 2012 to get the Sundt plant off of coal out of concern that its emissions could damage public health in a highly urbanized area.

ALTERNATIVE ENERGY AND EFFICIENCY

Coke Installs 1M HFC-Free Coolers

[Environmental Leader, Jan. 23] The Coca-Cola Company has installed its 1 millionth hydrofluorocarbon (HFC)-free cooler using natural refrigerant, preventing the emission of 5.25 million metric tons of CO₂ over 10 years, the company says. The HFC-free coolers use CO₂, which eliminates 99 percent of direct emissions. This milestone moves the company closer to its goal of phasing out the use of HFC refrigerant, which contributes to climate change, in Coca-Cola dispensers, vending machines and coolers globally. Together with its bottling partners, Coca-Cola has set a goal that all new cold-drink equipment will be HFC-free by 2015. Achieving this goal will prevent the emission of more than 50 million metric tons of CO₂ over 10 years, the company says. Coca-Cola has improved its cooling equipment energy efficiency by 40 percent since 2000; and eliminated 75 percent of direct greenhouse gas emissions by transitioning to HFC-free insulation foam for new equipment. Over the last 10 years the company has invested more than \$100 million to make its coolers better for the environment, says Jeff Seabright, vice president, environment and water.

Honda Automobile Dealer Is First in US to Achieve "Electric Grid Neutral" Status

[Automotive World, Jan. 23] Of the approximately 17,500 automobile dealers in the United States, Rossi Honda of Vineland, New Jersey is the nation's first and only dealer to achieve "Electric Grid Neutral" status, producing as much as or more energy from renewable energy sources than it consumes from its local electric utility over a one-year period.¹ Working closely with [Honda's Environmental Leadership Program](#) team, the independently-owned dealership was able to quantify its energy use and develop and execute a plan to make it the nation's first electric grid neutral dealer, a significant achievement for a type of business that has large energy needs. Watch a video: http://youtu.be/5NyUf_Kn6Pg Electric Grid Neutral buildings reduce CO₂ emissions resulting from the generation of electricity by the nation's electric grid. CO₂ (carbon dioxide) is a greenhouse gas that contributes to global climate change. Rossi's precedent-setting achievement earned it a top-level "Platinum" Honda Environmental Leadership Award, reserved for dealers who verifiably reduce their net grid electricity use to zero (Electric Grid Neutral) or achieve LEED² certification. Through a combination of energy efficiency measures and on-site solar energy, the dealership reduced its annual grid electricity consumption by approximately 321,000 kWh and annual CO₂ output by approximately 341,000 lbs.

Mayors to Ramp Up Energy Efficiency

[Energy Manager Today Jan. 23] Energy efficiency remains a top priority among US mayors even in an era of tough budgets and rising costs. Mayors expect to increase spending over the next five years and are seeking private-sector partners. This was revealed in a new survey of nearly 300 cities that was released in conjunction with the [US Conference of Mayors \(USCM\) 82nd Winter Meeting](#) in Washington, DC. The survey, [Energy Efficiency and Technologies in America's Cities](#), confirmed that cities see

investing in energy efforts benefits taxpayers and the communities as a whole, said the USCM. The survey was done in conjunction with Philips. It indicates that mayors plan to make energy-efficient lighting technology (LEDs as the primary example) a top priority over the next two years. LED/energy efficient lighting was also overwhelmingly rated as the “most promising” technology for reducing city energy use and carbon emissions, with more than four in five cities of those surveyed (82 percent) reporting. In addition to lighting, retrofitting public buildings also ranked as a top priority in improving the energy efficiency of city infrastructure. Mayors expect to use their own local resources, followed by partnerships with the private sector, as the sources of financing these technologies. And in terms of the actual deployment of new technologies, survey findings reveal that more than seven in ten mayors believe their local utilities are now their city’s most important partner in doing so.

[Power Electronics Smooth Solar Transition](#)

New devices address instability caused by high penetration of distributed solar.

[MIT Tech Review, Jan. 21] The growing popularity of solar panels is increasing the stress on power grids. The debate over who pays for upgrades is likely to keep heating up. As rooftop solar panels become increasingly popular, utilities are growing concerned that they will put pressure on local grids, destabilizing power service and requiring costly equipment upgrades. The rapid adoption of solar photovoltaics has already prompted changes in Germany and parts of Hawaii, California, and New Jersey. Because nearly 10 percent of Hawaiian Electric’s customers have rooftop solar, the utility now requires solar contractors and customers on the island of Oahu to get approval before installing a PV system. It’s also developing a model for sharing the cost of studying what upgrades may be required to add another rooftop solar system, says a spokesperson for the local utility. To address the instability caused by distributed solar, startup Gridco Systems is introducing a product that uses power electronics to smooth out spikes in voltage caused by solar generators. The company thinks its ground- or pole-mounted devices will create a distributed control infrastructure to monitor and manage the flow of power for a number of uses, including solar integration. Today’s electromechanical systems, such as capacitor banks or voltage regulators at substations, can take minutes to adjust voltage and are far removed from the solar installations where the problems occur. Meanwhile, prices have come down for power electronics, devices that can change the properties of electricity and precisely control the amount of power going to various applications. That means the technology is more economical for use in the power grid, says Naimish Patel, the CEO of Gridco Systems, which has raised \$30 million from venture capitalists.

[World's Biggest Solar Plant May Pave Way for Smaller-Scale Renewable Future](#)

Vast desert solar farms helping to meet energy targets but environment and wildlife campaigners raise concerns

[The Guardian, Jan. 21] Tower One glows so bright against the blue sky that even at mid-afternoon in the Mojave Desert it would be easy to conclude it is designed to illuminate the valley floor below. In fact, hundreds of thousands of glittering mirrors, carefully arranged across a swath of desert, reflect sunlight on to the tower and two others like it, heating them to 538C and causing the glow. Water in pipes atop the towers turns to steam. The steam spins turbines to generate electricity. The [Ivanpah Solar Electric Generating System](#) will send that power across California, the Golden State, early this year, becoming the largest solar plant in the world to concentrate the sun’s rays to produce electricity. Such utility-sized solar plants are beginning to appear across the US, with 232 under construction, in testing or granted permits, many in the south-west and California, says the Edison Electric Institute, which represents utilities. The scale of the largest plants is difficult to imagine in the eastern part of the country, where a relative lack of available open land and unobstructed sunlight have limited solar facilities to perhaps a tenth the size of the West’s plants. In the west, ample sun, wide-open spaces, financial incentives, falling costs and state mandates have made big solar plants possible. “Right now you’re seeing the gold rush of renewable [\[energy\]](#) projects coming on line,” said Fong Wan, senior vice-president for energy procurement at Pacific Gas and Electric, the big northern California utility that has bought about two-thirds of the

electricity the Ivanpah plant will produce. But even as the largest plants are helping utilities meet state requirements for renewable energy, the appetite for them may be waning, say experts. The next phase of solar development – especially in the east – may feature smaller projects located closer to cities. Environmental groups want regulators to look at sites such as landfills and industrial zones before allowing construction in largely undisturbed environments such as deserts.

ENERGY/GENERAL

[ASHRAE Publishes Fourth Edition of Its GreenGuide](#)

[Energy Manager Today, Jan. 22] The newly published fourth edition of the ASHRAE GreenGuide contains updated guidance that reflects how green building practices as well as the industry have changed since the first edition was published in 2004. Over the past decade, the industry has witnessed the continued evolution of green building programs have evolved from voluntary to more in the industry mainstream or mandatory, according to ASHRAE. [ASHRAE GreenGuide: Design, Construction, and Operation of Sustainable Buildings, 4th Edition](#), uses an integrated, building systems perspective to provide need-to-know information on what to do, where to turn, what to suggest, and how to interact with other members of the design team. The guide contains several changes that will impact green building design.

[Cyber Skills Training Increasing Online](#)

[Fierce Smart Grid, Jan. 29] Throughout the country, more cybersecurity workers are in demand across various industries as the need to safeguard the nation's technological capabilities increases. Of particular concern is the security and reliability of the energy and utility infrastructure, underscored by the formidable threat of cyberattacks, which cost the United States more than \$110 billion annually. To help meet this employment demand in the energy industry, the Energy Providers Coalition for Education (EPCE) has joined with Excelsior College, to offer an online cybersecurity education program for energy industry workers. The EPCE-sponsored online program provides students with the necessary skills and training to decrease the energy grid's vulnerability to cyberattacks and mitigate the effects of cyber terrorism. This training provides students with the needed proficiencies in areas such as vulnerability assessments and remediation planning, cryptographic analysis and solutions, secure operations and controls, forensic investigations and reverse engineering, and meets all of the National Security Agency's Committee on National Security Systems (CNSS) Training Standards.

[Oil Prices Stall Following Lackluster China Data](#)

[Associated Press, Jan. 23] By early afternoon in Europe, benchmark U.S. crude for March delivery was up 8 cents at \$96.11 a barrel in electronic trading on the New York Mercantile Exchange. A preliminary manufacturing index for China fell to 49.6 in January, below the 50 level that signifies expansion and a six-month low, according to HSBC and Markit Economics. That suggests demand will drop in the world's second-largest economy. That was echoed in a report by the American Petroleum Institute, which said U.S. crude stocks rose 4.9 million barrels last week. Analysts polled by Platts, the energy information arm of McGraw-Hill Cos., had predicted a draw of 1.9 million barrels. The report from the Energy Department's Energy Information Administration — the market benchmark — will be out on Wednesday. If the stock build is confirmed, it would be the first rise in eight weeks.

[Power Plant Additions, Retirements Tracked](#)

[Energy Manager Today, Jan. 27] The US Energy Information Administration has started publishing new tables and maps to illustrate provide detailed accounting of generator additions and retirements. The [Electric Power Monthly](#) reports calculate the effects on total capacity by fuel and technology type, on a state-by-state basis. Maps make it easier to see the concentration of new solar generation in the Southwest, natural gas generators in Texas and the Atlantic Coast, and wind generators in the Plains region that are expected to come online between December 2013 and November 2014.

Utility Execs Rank Outages As Top Cybersecurity Threat

[Fierce Smart Grid, Jan. 22] Zpryme is reporting the results of its latest smart grid cybersecurity research. Not surprisingly, cybersecurity is still a huge challenge for utilities -- and they know it. But what are they doing about it? The survey revealed that more than 60 percent of respondents believe smart grid security is a "big problem", with 64 percent reporting that they believe the grid is not well-prepared for security threats. Outages, as they relate to smart grid security, were ranked as executive's top concern and called the "most severe" consequence of a breach. The most severe consequence was shockingly not the risk of terrorist attack. Regardless of executives' security concerns, the survey surprisingly revealed that only 8 percent of utilities (or one in 10) have plans to invest more than \$5 million in cybersecurity technology over the next five years. Nearly four out of 10 respondents, or 38 percent, are relying on the government and standard to quell their smart grid security concerns.

INDUSTRIES AND TECHNOLOGIES

An Energy Harvesting Breakthrough

[Fierce Energy, Jan. 20] MIT researchers have developed a new approach to harvesting solar energy that could improve efficiency by using sunlight to heat a high-temperature material whose infrared radiation would then be collected by a conventional photovoltaic cell. This technique could also make it easier to store the energy for later use. According to the researchers, such a system combines the advantages of solar photovoltaic systems, which turn sunlight directly into electricity, and solar thermal systems, which can have an advantage for delayed use because heat can be more easily stored than electricity. The new solar thermophotovoltaic (STPV) systems could provide efficiency because of their broadband absorption of sunlight, scalability and compactness, and ease of energy storage. But obstacles threaten the potential of the technology, as previous experiments have been unable to produce a STPV device with efficiency of greater than 1 percent. However, the research team has already produced an initial test device with a measured efficiency of 3.2 percent, but it will have to reach 20 percent efficiency to be commercially viable.

New Solar PV Capital Expenditure Cycle to Start in 2015, According to NPD Solarbuzz *New gigawatt solar factories to provide up to \$10 billion of revenues to PV equipment suppliers in 2017*

[Solarbuzz.com, Jan. 30] Santa Clara, CA – Capital expenditures for equipment suppliers serving the solar photovoltaic (PV) manufacturing sector are forecast to enter a new upturn phase beginning in 2015. According to new research in the latest NPD Solarbuzz *PV Equipment Quarterly*, PV equipment spending could potentially reach \$10 billion in revenues in 2017. "During 2012 and 2013, solar PV equipment suppliers were confronted by the sharpest downturn ever to hit the sector," according to Finlay Colville, vice president at NPD Solarbuzz. "The decline was caused by strong over-capacity that reshaped the entire PV industry in 2012, which resulted in manufacturers' capital expenditure budgets being put on hold during 2013." For 2013, PV equipment spending—covering tool revenues from crystalline silicon (c-Si) makers of ingots, wafers, cells, modules, and thin-film panels—declined to an eight-year low of \$1.73 billion. This drop contrasts sharply with the previous cyclical peak of approximately \$13 billion in 2011. With capital expenditures largely frozen in 2013, PV equipment suppliers recorded less than \$1 billion of net bookings last year, keeping the PV book-to-bill ratio well below parity. In the absence of new PV orders, many equipment suppliers were forced to restructure internal PV business units and focus on other technology sectors. Over the next six months, however, end-market solar PV demand will catch up with the 45 gigawatts (GW) of effective capacity within the industry, and this will mark the official end of the two-year downturn in capital expenditure. Thereafter, plans will quickly emerge from PV manufacturers for new capacity additions, which will ultimately drive a strong rebound in revenues available to the equipment supply chain.

[Sharp Says to End Solar Panel Production in U.S. by End-March](#)

[Reuters, Jan. 23] TOKYO – Japan's Sharp Corp said on Thursday it would stop making solar panels in the United States by the end of March, extending its overhaul of unprofitable operations in response to fierce competition from low-cost Chinese rivals. The decision is in line with a strategy devised by the electronics maker last May to recover from heavy losses across its businesses. As part of a three-year revival plan, Sharp promised to slim down its solar panel operations overseas and strengthen its display business. The U.S. shutdown would cost about 300 jobs, or two-thirds of the workforce, at a Sharp plant in Tennessee.

LEGISLATION AND REGULATION

[Commerce to Begin New Antidumping Duty Probes of PV Products from China, Taiwan](#)

[Power Magazine, Jan. 23] The U.S. Commerce Department will begin fresh antidumping and countervailing duty investigations of imports of certain crystalline silicon photovoltaic products from China, as well as an antidumping duty investigation of imports from Taiwan. The department announced today that the scope of the new investigations, petitioned for by SolarWorld Industries, specifically excludes products covered by existing antidumping and countervailing duties. These include crystalline silicon photovoltaic cells that are thicker than 20 micrometers, as well as modules, laminates and/or panels consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including building integrated materials. The U.S. International Trade Commission (ITC) is now expected to make its preliminary injury determinations on or before Feb. 14, 2014. If the ITC determines a “reasonable indication” that imports from China and/or Taiwan materially injure the U.S. domestic solar industry, the investigations are expected to continue. The Commerce Department could then make its preliminary determinations in March 2014 and June 2014.

[DOE Formally Commits \\$1B to FutureGen 2.0 CCS Project](#)

[Power Magazine, Jan. 23] FutureGen 2.0, the government-backed but long-stalled carbon capture and storage (CCS) project proposed for Meredosia, Ill., will get about \$1 billion in cost-shared federal funding, the Department of Energy (DOE) announced on Jan. 22. A [Record of Decision \(ROD\)](#) published in the *Federal Register* marks the DOE's decision to provide \$1 billion of financial assistance to the FutureGen Industrial Alliance, a coalition of coal producers, users, and equipment suppliers. The majority of that funding was appropriated under the American Recovery and Reinvestment Act (ARRA), the ROD notes. The remainder is expected to come from cooperative agreements with the alliance. FutureGen 2.0's estimated total project cost is \$1.68 billion. The alliance plans to acquire and upgrade one unit of Ameren Energy Resources' Meredosia Energy Center, near Meredosia, Ill. The repowered 168-MWe unit will include oxycombustion and carbon capture technologies designed to capture at least 90% of its carbon dioxide emissions during “steady state” operation. It is expected to combust a blended mixture of 60% Illinois No. 6 bituminous coal and 40% Powder River Basin sub-bituminous coal. The captured greenhouse gas would then be transported through a 30-mile pipeline (using existing rights-of-way) to wells where it would be injected about 4,000 feet below ground into the Mt. Simon formation, a geologic saline formation that is one of the Illinois Basin's major deep saline formations, for permanent storage. The project will be designed to capture, transport, and inject about 1.2 million tons of CO₂ annually, the ROD noted. The DOE-funded demonstration period would last for 56 months from the start of operations—which is now slated for 2017.

[U.S.-Mexico Trans-Border Energy Accord Ready for Obama's Signature](#)

[EFE.COM website, Dec. 21] The U.S.-Mexico Transboundary Hydrocarbons Agreement was approved this week by senators in Washington as part of a budget bill that President Barack Obama will sign in the coming days, the White House said. The accord, signed in 2012 by the then-heads of U.S. and Mexican diplomacy, Hillary Clinton and Patricia Espinosa, will allow the two countries to explore for and develop crude reserves beyond each of their exclusive economic zones in the Gulf of Mexico, which were demarcated in

a 1978 maritime-boundary treaty. "This agreement will establish an environmentally safe and responsible framework to explore, develop, and share revenue from hydrocarbon resources that lie in waters beyond each country's exclusive, economic zones," White House National Security Council spokesperson Caitlin Hayden said in a statement Friday. The White House said the agreement was included as part of the Bipartisan Budget Act of 2013. The green light from the U.S. Congress comes during the same week in which Mexican President Enrique Peña Nieto signed an energy-overhaul bill that will pave the way for multinational energy companies to develop Mexican crude reserves for the first time since 1938.

WESTERN POWER

[Drought Offers an Opportunity to Consider Water Policy](#)

California must prepare to capture and store water to be used during future, inevitable shortages.

[Los Angeles Times, Jan. 19] SACRAMENTO — So it's official: We are in a serious drought. That means this: Next comes serious flooding. But we'll still be in a declared drought. That's just the nature of California weather patterns — and water politics. A drought proclamation, as issued by Gov. Jerry Brown on Friday, changes the political climate. It focuses public attention on the need for costly new waterworks. Therefore governors and water officials are always reluctant to declare a drought over, even when rivers again leap their banks, fill reservoirs and send torrents of muddy snowmelt, uprooted trees and drowned livestock cascading into the Pacific. That's when we'll curse ourselves for lack of foresight, for not having built the facilities to capture and store the floodwaters needed to get us through the next inevitable drought. You can look it up: After virtually every severe drought there's devastating flooding. That doesn't justify constructing just any waterworks. Brown's hugely expensive (\$25 billion), monstrous twin-tunnel project planned for California's main water hole, the Sacramento-San Joaquin River Delta, should be thoroughly reassessed. The proposed 40-foot wide, 35-mile long tunnels would siphon off great volumes of Sacramento River water before it flows through the delta, robbing local farmers and fish and disfiguring one of California's most bucolic areas. There hasn't been enough serious thought to modernizing or relocating existing flawed facilities at the other end of the delta.

[One Nevada Transmission Line Begins Serving Customers](#)

The U.S. Department of Energy provided a \$343 million loan guarantee to Great Basin Transmission South to help finance the project.


[T&D World Magazine , Jan. 28] NV Energy and Great Basin Transmission South officially dedicated the 231-mile long One Nevada Transmission Line (ON Line) today, marking the completion of a three-year project that electrically connects NV Energy's northern and southern service areas for the first time. ON Line also enables the development of renewable energy in remote parts of Nevada. The bulk transmission line is energized to 500,000 volts and has an initial capacity of up to 800 MW. The line runs from the Harry Allen Generating Station north of Las Vegas to the new Robinson Summit Substation located just west of Ely, Nevada. Eleven separate renewable energy projects are now being served by the new line, which also enhances the overall energy-sharing efficiencies of NV Energy's 10 generating stations located throughout Nevada.


[Southwest Adds Three New Geothermal Plants](#)


[Energy Prospects West, Jan. 21] Three new geothermal power plants went online in Nevada and New Mexico in December. But despite this year-end surge, annual U.S. geothermal capacity additions lost steam in 2013. The largest of the three new facilities, Gradient Resources Inc.'s 30-MW Patua Geothermal Project in Lyon County, Nev., began producing power at the end of December, while Ormat Technologies announced the completion of a 16-MW geothermal facility in neighboring Mineral County and Cryg Energy started operations on the first 4 MW of a planned 10-MW project in New Mexico. Both Nevada facilities produce electricity for utilities in California.


ARIZONA STATE INCENTIVES/POLICIES


ARIZONA COMMERCE AUTHORITY (ACA)


 **Angel Investment Tax Credit Program** - The main objective of the Angel Investment program is to expand early stage investments in targeted Arizona small businesses. The program accomplishes this goal by providing tax credits to investors who make capital investment in small businesses certified by the Arizona Commerce Authority (ACA). To view the list of businesses that have been certified under this program please click here. [LEARN MORE](#)


 **Arizona Innovation Accelerator Fund** - The Arizona Innovation Accelerator Fund Program is an \$18.2 million loan participation program funded through the U.S. Department of Treasury's SSBCI and managed by the Arizona Commerce Authority. The goal of this program is to stimulate financing to small businesses and manufacturers, in collaboration with private finance partners, to foster business expansion and job creation in Arizona. [LEARN MORE](#)


 **Arizona Innovation Challenge** - The Arizona Innovation Challenge is an investment in the minds of talented entrepreneurs in Arizona and around the world. The ACA will award \$1.5 million to the most promising technology ventures that participate in the Challenge (awards may range from \$100,000 to \$250,000). [LEARN MORE](#)


 **AZ Fast Grant** - Enables Arizona-based technology companies to initiate the commercialization process. Total funds available for this grant round are \$175,000. Maximum awards of \$5,000 and \$20,000 will enable companies to accomplish one of four scopes of work. [LEARN MORE](#)


 **AZ Step Grant** - Grant funding from the U.S. Small Business Administration (SBA) with matching funds contributed by the Arizona Commerce Authority (ACA) offering a number of services and tools to Arizona small businesses as they go global for the first time with sales or enter new, international markets. [LEARN MORE](#)

 **Commercial/Industrial Solar Energy Tax Credit Program** - The primary goal of the Commercial/Industrial Solar Energy Tax Credit Program is to stimulate the production and use of solar energy in commercial and industrial applications by subsidizing the initial cost of solar energy devices. The program achieves this goal by providing an Arizona income tax credit for the installation of solar energy devices in Arizona business facilities. [LEARN MORE](#)

 **Healthy Forest** - The primary goal of the Healthy Forest Enterprise Incentives Program is to promote forest health in Arizona. The program achieves this by providing incentives for certified businesses that are primarily engaged in harvesting, processing or transporting of qualifying forest products. [LEARN MORE](#)

 **Job Training Program** offers job-specific reimbursable grants for employers creating new jobs or increasing the skill and wage level of their current employees. Deadline: Year Round. [LEARN MORE](#)

 **Renewable Energy Tax Incentive Program** offers a refundable income tax credit and property tax reduction to companies in solar, wind, geothermal and other renewable energy industries who are expanding or locating a manufacturing or headquarters operation in Arizona. The tax credit is up to 10% of the total qualified investment amount and the property tax benefit can reduce a company's property taxes by up to 75%. Deadline: Year Round. [LEARN MORE](#)

 **Research and Development Tax Credit** is an Arizona income tax credit for increased research and development activities conducted in this state. Starting in 2010, a qualifying company may be eligible to claim a partial refund of its current year excess

R&D credit. Applicants may apply at the end of their tax year but prior to filing a tax return with Revenue. [LEARN MORE](#)


Quality Jobs Tax Credit Program - The primary goal of the Quality Jobs Tax Credit program is to encourage business investment and the creation of high-quality employment opportunities in the state. The program accomplishes this goal by providing tax credits to employers creating a minimum number of net new quality jobs and making a minimum capital investment in Arizona. [LEARN MORE](#)


Bonds Administered by the Arizona Commerce Authority


- **Private Activity Bonds (PAB)** - Tax exempt bond financing, for federal purposes, offers an alternative financing mechanism for certain projects. [LEARN MORE](#)
- **Qualified Energy Conservation Bonds (QECB)** - Tax credit bonds are available as an alternative financing mechanism for certain green projects. [LEARN MORE](#)

Federal Programs

- **Small Business Innovation Research (SBIR) Program** - SBIR is a competitive program that encourages small businesses to explore their technological potential, as well as, providing incentive to profit from its commercialization. [LEARN MORE](#)
- **Small Business Technology Transfer (STTR) Program** - STTR is an important small business program that expands funding opportunities to meet the nation's scientific and technological challenges in the 21st century. [LEARN MORE](#)
- **Work Opportunity** - The Work Opportunity Tax Credit (WOTC) is a federal tax credit of up to \$9,000 that Congress provides to private-sector businesses for hiring individuals from nine target groups who have consistently faced significant barriers to employment. [LEARN MORE](#)


 **Pollution Control Tax Credit** - Provides a 10 percent income tax credit on the purchase price of real or personal property used to control or prevent pollution.

 **Renewable Energy Production Tax Credit** - An income tax credit awarded to utility-scale generation systems based on the amount of electricity produced annually for a 10-year period using solar or wind energy. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

 **Sales Tax Exemption for Machinery and Equipment**
Exemptions are available for:

1. Machinery or equipment used directly in manufacturing, see [ARS 42-5159\(B\)\(1\)](#).
2. Machinery, equipment or transmission lines used directly in producing or transmitting electrical power, but not including distribution, see [ARS 42-5159\(B\)\(4\)](#).
3. Machinery or equipment used in research and development, see [ARS 42-5159\(B\)\(14\)](#).

Questions can be directed to Christie Comanita (602-716-6791).

 **Solar Liquid Fuel Tax Credit** - Income tax credits are available for research and development, production and delivery system costs associated with solar liquid fuel. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).



Database of State Incentives for Renewables and Efficiency (DSIRE)

- [Arizona Incentives/Policies](#)
- [Federal Incentives/Policies](#)
- [Solar Policy News](#) - DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available:

(Click On Title To View Solicitation)

- [Environmental Education Model Grants - Response due February 4, 2014](#)
- [SBIR/STTR FY 2014 Phase 1 Release 2 - Response due February 4, 2014](#)
- [Environmental Workforce Development and Job Training Grants - Response due February 13, 2014](#)
- [Certification and Rating of Attachments for Fenestration Technologies \(CRAFT\) - Response due February 15, 2014](#)
- [Assisting Federal Facilities with Energy Conservation Technologies - Response due February 18, 2014](#)
- [Energy for Sustainability - Response due February 20, 2014](#)
- [Environmental Health and Safety of Nanotechnology - Response due February 20, 2014](#)
- [Particulate and Multiphase Processes- Response due February 20, 2014](#)
- [Thermal Transport Processes - Response due February 20, 2014](#)
- [Value Added Producer Grant - Response due February 24, 2014](#)
- [Plant Feedstock Genomics for Bioenergy: A Joint - Response due February 25, 2014](#)
- [Vehicle Technologies Incubator – Response due February 28, 2014](#)
- [Next Generation Photovoltaic Technologies 3 - Response due March 3, 2014](#)
- [Sunshot Incubator Program Round 9 - Response due March 13, 2014](#)
- [National Incubator Initiative for Clean Energy \(NIICE\) – Response due March 21, 2014](#)
- [Next Generation Photovoltaic Technologies III – Response due March 24, 2014](#)
- [Advanced Fossil Energy Projects - Solicitation Number: DE-SOL-0006303 - Expiration Date 11/30/2016](#)
- [Sunshot "Race to the Roof" Initiative - Registration due October 31, 2014](#)
- [Repowering Assistance Program – Ongoing](#)
- [Rural Business Enterprise Grants– Ongoing](#)
- [Rural Business Opportunity Grants– Ongoing](#)
- [Sustainable Agriculture Research and Education Grants – Ongoing](#)

- Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines
- U.S. Dept. of Agriculture - Rural Development Grant Assistance

ENERGY-RELATED EVENTS

2014

- ✚ [Energy, Utility & Environment Conference](#)
February 3-5, 2014 Phoenix, AZ
- ✚ [Solar Power Generation USA Congress 2014](#)
February 4-5, 2014 San Diego, CA
- ✚ [2014 Energy Outlook Conference](#)
February 4-7, 2014 Washington, DC
- ✚ [Tribal Telecom 2014](#)
February 10-12, 2014 Phoenix, AZ
- ✚ [NEW! Energy & Agriculture Workshop](#)
February 13, 2014 Phoenix, AZ
- ✚ [Sustainability Solutions Festival](#)
February 17-22, 2014 Phoenix, AZ
- ✚ [Arizona Solar Summit IV](#)
February 20, 2014 Phoenix, AZ
- ✚ [Green Biz Forum 2014](#)
February 18-20, 2014 Phoenix, AZ
- ✚ [Southwest Economic Summit](#)
February 24, 2014 Phoenix, AZ
- ✚ [Sustaining the Reservation: Creating Tribal Economies](#)
February 27-28, 2014 Tempe, AZ
- ✚ [NEW! Solar PV Trade Mission Mexico](#)
March 3-7, 2014 Mexico City, MEXICO
- ✚ [NARUC – Current Issues](#)
March 9-12, 2013 Santa Fe, NM
- ✚ [Solar O&M North America](#)
March 25-26, 2014 San Francisco, CA
- ✚ [Clean Tech Future Conference III](#)
April 9, 2014 Phoenix, AZ
- ✚ [International Geothermal Energy Forum](#)
April 23-24, 2014 Washington, DC
- ✚ [11th Annual Construction in Indian Country Nat'l, Conference](#)
April 28-30, 2014 Chandler, AZ
- ✚ [VerdeXchange Arizona](#)
April 30-May, 2, 2014 Phoenix, AZ
- ✚ [AWEA WindPower 2014](#)
May 5-8, 2014 Las Vegas, NV

- ✚ [Beyond the Border: Arizona Trade Mission to Mexico City & Guadalajara](#)
May 12-16, 2014
- ✚ [SunShot Grand Challenge Summit 2014](#)
May 19-22, 2014 Anaheim, CA
- ✚ [Native American Economic Development & Energy Projects Conference](#)
June 16-17, 2014 Anaheim, CA
- ✚ [32nd Annual West Coast Energy Management Congress](#)
June 25-26, 2014 Seattle, WA
- ✚ [National Geothermal Summit](#)
August 5-6, 2014 Reno, NV
- ✚ [Geothermal Energy Expo](#)
September 28-October 1, 2014 Portland, OR
- ✚ [ASU Sustainability Series Events](#)
- ✚ [Green Building Lecture Series](#)
Granite Reef Senior Center Scottsdale, AZ